

OFFICIAL CENTRAL FAX CENTER
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AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for the preparation of a vaccine against tuberculosis and other an intracellular pathogens pathogen selected from the group consisting of *M. tuberculosis*, *Mycobacterium M. leprae*, ~~[[f]]~~*Leishmania*, ~~[[s]]~~*Salmonella*, ~~[[f]]~~*Trypanosoma*, ~~[[p]]~~*Plasmodium*, ~~[[b]]~~*Brucella*, ~~[[f]]~~*Listeria*[[, HIV]] and ~~[[s]]~~*Streptococcus*, wherein the process comprises the steps of:

- (i) culturing the intracellular pathogen ~~pathogens selected from the group comprising of *Mycobacterium tuberculosis*, *Mycobacterium leprae*, *leishmania*, *salmonella*, *trypanosoma*, *plasmodium*, *brucella*, *listeria*, + HIV and *streptococcus*~~;
- (ii) culturing syngeneic (same strain), allogeneic (different strain) and xenogeneic (different species like sheep and goat) macrophages and macrophage cell lines selected from the group consisting of J774, P388D1, RAW, BMC-2 and THP-1;
- (iii) infecting the macrophages and macrophage cell lines with the selected pathogen of step (i) of step (ii) with a pathogen;
- (iv) treating the infected cells macrophages and macrophage cell lines with pathogen specific drugs to kill the pathogen, followed by gamma irradiation to kill the macrophage or macrophage cell line and remaining pathogens to obtain a composition ~~the vaccine~~;
- (v) immunizing disease resistant and susceptible strains of animals with the composition ~~vaccine obtained above~~;
- (vi) infecting the vaccinated animals with live selected pathogen and monitoring ~~their~~ animal mortality, and viable counts of infectious agent the pathogen in lungs, spleen and liver;[[and]]

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- (vii) monitoring the vaccinated animals for proliferation and generation of CD4⁺ Th1 and Th2 cells and CD8⁺ cytotoxic T cells indicating the generation of cell mediated immunity against the pathogen; and
- (viii) wherein the composition is a vaccine if administration of the composition results in decreased mortality of vaccinated animals and/or decreased viable counts of the pathogen in lungs, spleen, and liver of the infected animals when compared to non-immunized animals.

2. (currently amended) A process for the preparation of a vaccine against tuberculosis, ~~said the~~ process comprising the steps of:

- (i) culturing *Mycobacterium M. tuberculosis* H37Rv;
- (ii) culturing syngeneic, and allogeneic and xenogenic macrophages and macrophage cell lines selected from the group consisting of J774, P388D1, RAW, BMC-2 and THP-1;
- (iii) infecting the macrophages and macrophage cell lines (J774, P388D1, RAW, BMC-2, THP-1) with *M. tuberculosis*;
- (iv) treating the infected cells macrophage and macrophage cell lines with amikacin, isoniazid and gamma irradiation to kill the ~~bacteria~~ macrophage or macrophage cell line and remaining *M. tuberculosis* to obtain a composition the vaccine;
- (v) immunizing tuberculosis resistant and susceptible strains of mice with an allogeneic macrophage tuberculosis composition vaccine (AMTV) or syngeneic macrophage tuberculosis composition vaccine (SMTV) or xenogenic macrophages tuberculosis composition vaccine (XMTV) ~~obtained above~~;

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- (vi) infecting the vaccinated group of mice with live *M. tuberculosis* and monitoring ~~their animal~~ mortality, and viable counts of ~~bacteria~~ *M. tuberculosis* in lungs, spleen and liver;[[and]]
- (vii) monitoring the vaccinated animals for proliferation and generation of CD4⁺ Th1 and Th2 cells, and CD8⁺ cytotoxic T cells indicating the generation of cell mediated immunity against *M. tuberculosis*; and
- (viii) wherein the composition is a vaccine if administration of the composition results in decreased mortality of vaccinated animals and/or decreased viable counts of *M. tuberculosis* in lungs, spleen, and liver of the infected animals when compared to non-immunized animals.

3. (currently amended) A process for the preparation of a vaccine against salmonella, ~~said the~~ process comprising the steps of:

- (i) culturing *Salmonella typhimurium*;
- (ii) culturing syngeneic, ~~and~~ allogeneic macrophages and xenogenic macrophages and macrophage cell lines selected from the group consisting of J774, P388D1, RAW, BMC-2 and THP-1;
- (iii) infecting the macrophages and macrophage cell lines (J774, P388D1, RAW, BMC-2, THP-1) with *S. typhimurium*;
- (iv) treating the macrophage and macrophage cell lines infected cells with mitomycin C and gamma irradiation to kill the macrophage or macrophage cell line and remaining *S. typhimurium* to obtain a composition the vaccine;
- (v) immunizing salmonella resistant and susceptible strains of mice with the composition vaccine obtained above;

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- (vi) infecting the vaccinated group of mice with live *S. typhimurium* and monitoring their animal mortality, and viable counts of bacteria *S. typhimurium* in lungs, spleen and liver;[[and]]
- (vii) monitoring the vaccinated animals for proliferation and generation of CD4⁺ Th1 and Th2 cells, and CD8⁺ cytotoxic T cells indicating the generation of cell mediated immunity against *S. typhimurium*; and
- (viii) wherein the composition is a vaccine if administration of the composition results in decreased mortality of vaccinated animals and/or decreased viable counts of *S. typhimurium* in lungs, spleen, and liver of the infected animals when compared to non-immunized animals.

4. (canceled)

5. (currently amended) A vaccine as prepared by the process as claimed in claim 1, wherein by entrapment of *M. tuberculosis*, *Salmonella typhimurium* and other intracellular pathogens in the allogeneic, syngeneic and xenogenic macrophages, the preparations being treated by the available drugs selected from amikacin, ~~isoniazid~~ isoniazid and gamma radiation for tuberculosis and mitomycin C and gamma radiation for *S. typhimurium* to kill the pathogens and the vaccine is further gamma irradiated before using being used for the protection against the infectious diseases.